

**STATEMENT OF THE
ENVIRONMENTAL LAW AND POLICY CENTER OF THE MIDWEST**

**SECTION 9006: EXPANDING RENEWABLE ENERGY AND ENERGY EFFICIENCY
USDA STAKEHOLDERS' MEETING
WASHINGTON, D.C. -- DECEMBER 3, 2002**

I am Faith Bugel, a staff attorney with the Environmental Law and Policy Center of the Midwest ("ELPC"), a regional public interest environmental quality and economic development organization, which is based in Chicago, Illinois. With me today is Jim Lyons, who is working with ELPC on the implementation of the new clean energy development provisions in the 2002 Farm Bill.

We are providing comments today on how to implement Section 9006 of the Farm Security and Rural Investment Act of 2002 in order to best achieve the opportunities to expand on-farm and on-ranch development of renewable energy systems and energy efficiency improvements. We will identify the types of renewable energy systems and energy efficiency improvements that should be given priority during this first round of program funding, and will comment on how the Section 9006 program should be structured. We will also describe an approach for evaluating project applications that is both equitable and consistent with the Congressional intent in drafting Section 9006 in order to promote the use of renewable energy systems and energy efficiency improvements on farms and ranches and in rural communities.

We commend USDA for its efforts to involve and receive input from a broad group of interested parties on Section 9006. Farmers, ranchers and rural small businesses throughout the Midwest are interested in and in need of the funds that will be made available through the Section 9006 process. We urge USDA to act as quickly as practicable.

The recommendations we offer are applicable should USDA proceed to disperse the FY03 funds available under Section 9006 via rulemaking or a Notice of Funding Availability ("NOFA"). ELPC strongly urges USDA to use the NOFA process to make Section 9006 funds available in FY03. A NOFA is much more likely to make Section 9006 incentives available within the next six months than a rulemaking. Farmers, ranchers and rural small businesses throughout the United States are very interested in applying for Section 9006 incentives as soon as USDA establishes the funding mechanism. Section 9006, together with ELPC's comments and comments submitted by other parties, provide sufficient detail for the USDA to draft an effective NOFA. Finally, a NOFA could be used as the basis for a future rulemaking.

We also recommend that the NOFA contain a preference for applicants that are small farmers, small ranchers, or as required by the statute, rural small businesses. We believe this is consistent with Congress' intent.

ELPC believes the recommendations we make herein are consistent with the intent of Section 9006 to foster development of renewable energy systems and energy efficiency improvements in a manner that provides both environmental benefits and economic growth to farmers, ranchers and rural small businesses.

1) Program Objectives:

A NOFA normally includes a Summary that provides both background and program objectives. We recommend that the Summary states the objective of the Section 9006 program, which is to assist farmers, ranchers, and rural small businesses in producing renewable energy and in seeking energy efficiency upgrades with the expectation of consequent economic and environmental benefits. It should explain that on-farm renewable energy systems and energy efficiency improvements can help reduce the costs of farming and ranching. Energy is a major expense for many farmers and ranchers. Renewable energy generation can also diversify the income of farmers and ranchers and help mitigate the impacts of commodity crop price volatility. The Summary should also explain that the development of renewable energy systems and energy efficiency upgrades in rural areas will stimulate rural economies by creating a demand for local industries to design, build and maintain the systems. Finally, the Summary should state that the 9006 program will showcase successful renewable energy and energy efficiency business models. Long-term economic and environmental benefits of the program can therefore extend beyond immediate grant recipients.

2) Definitions of Key Terms:

We recommend that the following definitions be used in the NOFA:

- a) Anaerobic Digesters: The term “anaerobic digesters” means manure, wastewater, or farm waste digesters with a methane capture system.
- b) Biomass: “The term ‘biomass’ means any organic material that is available on a renewable or recurring basis. The term biomass includes agricultural crops; trees grown for energy production; wood waste and wood residues; plants (including aquatic plants and grasses); residues; fibers; animal wastes and other waste materials; and fats, oils, and greases (including recycled fats, oils, and greases). The term ‘biomass’ does not include paper that is commonly recycled; or unsegregated solid waste.”¹
- c) Renewable Energy: “The term ‘renewable energy’ means energy derived from (A) a wind, solar, biomass, or geothermal source; or (B) hydrogen derived from biomass or water using an energy source described in subparagraph (A).”²
- d) Rural Small Business: The term “rural small business” means a concern with fewer than 50 employees and less than \$1 million in gross annual revenues located in an area outside of a Metropolitan Statistical Areas (MSAs). MSAs are areas that include a city with more than 50,000 inhabitants, or an urbanized area with at least 50,000 inhabitants and a total MSA population of more than 100,000. Additionally, the term small business means a business, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is applying for USDA grants or loans, and can further qualify under criteria set forth in the regulations of the Small Business Administration (13 C.F.R. 121).

¹ Farm Security and Rural Investment Act of 2002, Section 9001(3).

² Farm Security and Rural Investment Act of 2002, Section 9001(4).

3) Eligible Grant, Loan and Loan Guarantee Uses:

We recommend the following projects as eligible for grants, loans and/or loan guarantees under Section 9006. Pursuant to Section 9006's language, grant funds shall cover no more than 25% of the project costs, and the combined grant, loan, and loan guarantee funds shall cover no more than 50% of the project costs. These limits should still apply to proposals that would be eligible to seek funding under multiple projects listed in this section.

a) Farm, Ranch and Rural Small Business Energy Efficiency Projects:

Farmers, ranchers and rural small businesses may apply for grants, loans and loan guarantees for the cost of onsite energy efficiency projects. Farmers, ranchers and rural small businesses that have been approved to receive or that have received funds from state programs for energy efficiency projects are encouraged to apply for matching federal grants, loans and loan guarantees under this subsection. Such projects can include, for example: energy efficiency upgrades for pumps and motors for dairy operations and water and irrigation pumping equipment; energy-efficient lighting and motor systems upgrades utilizing Energy Star® and other nationally rated energy-efficient equipment; energy efficiency upgrades to a residence located on a farm or ranch; and/or onsite energy efficiency audits.

This recommendation reflects statements in Section 9006 and the Managers' Statement supporting efficiency projects.³ Energy efficiency projects are highly cost-effective, come on-line quickly, provide a significant financial advantage for farmers and ranchers via reduced energy costs, and often provide electric-distribution grid reliability benefits. For instance, investments in energy efficiency cost approximately 2.4 cents per kWh, which is significantly less than the cost of generating, transmitting and distributing electricity to consumers.⁴ However, the economic benefits of energy efficiency projects are often not well understood, with the initial costs of efficiency upgrades appearing to be more prohibitive than they actually are. Section 9006 funding for energy efficiency projects will help overcome this barrier.

The matching mechanism recommended in this subsection will encourage valuable state and federal partnerships for energy efficiency projects, thereby leveraging the funding available under the section for energy efficiency improvements.

Finally, we recommend that a significant portion of the funds available under Section 9006 go towards energy efficiency projects, which we expect to be among the most cost-effective of all project areas in the section.

(b) Distributed Generation Small-Scale Renewable Energy Projects:

Farmers, ranchers and rural small businesses may apply for grants, loans and/or loan guarantees for wind, solar, and biomass gasification projects of up to \$100,000 in total cost.

³ Joint Explanatory Statement of the Committee of Conference for the Farm Security and Rural Investment Act of 2002, p. 215.

⁴ ELPC, *Repowering the Midwest: The Clean Energy Development Plan for the Heartland*, 2001.

Grants shall not exceed \$25,000 under this subsection. The primary purpose of this subsection is to support the growth of renewable distributed generation projects.

We make this recommendation for wind, solar, and biomass gasification, but note that small-scale wind is the most mature technology, enjoys the broadest popular interest in the farm community, and is the likeliest beneficiary. The bulk of the small wind turbine industry is currently 10 kW or smaller, with turnkey costs of \$45,000 or less. Applicants for such projects under this recommended eligible use would likely be seeking to install a 10 kW turbine manufactured by Bergey Wind Power Inc. at a total cost of \$40,000 to \$45,000 including the turbine, the tower, the balance of system and installation. However, products are under development or on the market in limited quantities in the 40 kW range, and the \$100,000 level allows applicants to utilize the program to install this new technology. Solar electric and biomass gasification, while not expected to be as cost-competitive as the wind technologies, should be eligible to and allowed to compete for grants on equal terms. Solar thermal projects (producing heat for hot water and space heating) should also be eligible and could be very competitive in areas with established solar thermal dealers, but not many dealers are active in rural areas.

Electricity produced from current distributed generation renewable energy technologies is typically more expensive than power available via the distribution grid, so grants are expected to be an integral piece of project finance until scales of production are significantly increased. Loans and loan guarantees will also help lower costs of production and should be available and encouraged.

ELPC recommends that USDA should prioritize small-scale wind projects in states with net metering and or with corresponding financial incentive programs (see recommended Evaluation Criteria (a) and (c) below).

(c) “Wind Energy Cash Crop” Grants, Loans, and Loan Guarantees:

Farmers, ranchers, and rural small businesses may apply for grants, loans, and loan guarantees for wind projects with a nameplate capacity between 70 kW and 7 to 10 MW. The primary purpose of this subsection is to support the development of wind projects where the owner seeks to market bulk renewable power through the electric distribution grid and where the wind energy production is a “cash crop.”

ELPC recommends support for these larger “utility-scale” wind projects because such a program of grants, loans, and loan guarantees can demonstrate practical business models for future ventures of this scale. Although utility-scale wind technology (utilizing individual turbines with sizes of 750 kW to 1.5 MW or more) is now one of the most cost-effective renewable energy technologies, current project developments tend to be beyond the financial reach of local developers (frequently 30 MW to 100 MW at \$1 million per MW). Locally-owned projects in the range of 70 kW to 7 to 10 MW are much more likely to use local planning and construction contractors and therefore maximize local economic development benefits. Our recommendation is intended primarily to encourage and demonstrate successful financial models

for locally-owned utility-scale wind projects because we believe that such projects advance the broad goal of rural economic development contained within the Farm Bill.

We do not, however, recommend support under Section 9006 for projects larger than 7 to 10 MW. Developers of projects larger than 7 to 10 MW are more likely to have access to capital and financial expertise that lower their need for financial support relative to smaller project developers. Furthermore, projects much larger than 7 to 10 MW are likely to conflict with the definition of a rural small business as one with gross annual revenues of under \$1 million.

In the longer-term, USDA may want to consider whether to limit the eligibility of utility-scale wind projects to loan guarantees, and drop the grant and loan programs in order to extend limited funding. However, in the short term, grants will foster additional applications by providing models of successful projects and making utility-scale wind projects a more mainstream business venture.

Loans and loan guarantees offer significant potential benefits for utility-scale wind projects because of the high interest rates and burdensome loan terms currently associated with wind projects. Loans for wind projects are not easily available and, when available, contain unfavorable terms because of the relatively limited experience many financial lending institutions have with wind energy. Because wind projects are capital-intensive relative to fossil-fuel generating facilities, high loan costs are a significant barrier for independent wind developers. Loans and loan guarantees can improve access to capital for these developers and could perhaps be the single most cost-effective way for USDA to utilize limited resources in encouraging renewable energy resources.

(d) Wind Resource Assessments:

Farmers, ranchers, and rural small businesses may apply for grants for assessments of wind resources (including meteorological equipment leasing, equipment installation, and data analysis services) in rural areas, with a maximum grant of 25% of the total assessment cost.

This recommendation reflects the Farm Bill Managers' statement explicitly supporting audits.⁵ Audits, which indicate the most effective improvements for energy efficiency purposes, are in essence the same as assessments, which identify the areas with the best wind resources when locating a turbine. Assessments are not likely to cost more than \$10,000 to \$15,000, so 25% cost-sharing grants are not likely to exceed \$3,500 each, and would probably be significantly less. For utility-scale wind, assessments are a critical aspect of the financing request.

(e) Energy Capture from Anaerobic Digesters:

Farmers, ranchers and rural small businesses may apply for grants for the purchase of only a boiler, electric generator, or electric generator with hot water recovery system to use methane from anaerobic digesters decomposing manure, waste water, and/or farm wastes.

⁵ Joint Explanatory Statement of the Committee of Conference for the Farm Security and Rural Investment Act of 2002, p. 216.

Grants shall not exceed \$25,000 or 25%, whichever is less, of the total cost of the boiler, electric generator, or electric generator with hot water recovery system. \$25,000 reflects approximately 25% of the costs of installing electric generation equipment using biogas produced by a 900-head dairy farm equipped with an anaerobic digester system (for example, the well-publicized project at Haubenschild Farms in Minnesota). Grant funds may not be used to fund the purchase, construction, or engineering design work of a wastewater or manure storage lagoon, any other manure capture, storage or treatment system, any water pollution control system, or any methane capture system.

This recommendation reflects the primary intent of the Energy Title, which is on-farm renewable energy or energy efficiency capture, not the secondary benefits such as water pollution control (see evaluation criterion). Therefore funding should be directed specifically toward the primary goal of energy-related systems, not towards other various meritorious farm and ranch management practices, which can be funded through other Farm Bill programs. Section 9006 funding should focus on projects eligible for federal support under only this section, not on projects with other, larger support mechanisms.

Funding under this subsection should be coordinated with new USDA rules and regulations for the Environmental Quality Incentives Program (“EQIP”) which provide EQIP funding for animal waste management facilities. Such funding coordination should be in accordance with requirements to ensure that the environmental integrity of EQIP is not compromised. 16 U.S.C. § 3839aa, *et seq.*

(f) “Biomass Energy Cash Crop” Feedstock Support Grants:

Farmers, ranchers, and rural small businesses may apply for grants to subsidize the production of biomass feedstocks that are grown for the purpose of power generation and sold to utilities or others for that purpose. Grants shall not exceed \$10 per ton of biomass resource marketed for power generation, and shall not exceed \$500,000 per project per year.

We recommend grants for energy crop production for several reasons. Energy crops offer the clear potential of becoming a significant new market for farmers across America, diversifying farm income. Furthermore, the secondary environmental advantages of energy crop production, particularly of native grasses such as switchgrass, can be very significant, including water quality improvement (through erosion control and the need for fewer inputs than commodity crops), increased habitat (especially for declining grassland birds), and potential carbon sequestration. Finally, researchers, farm groups and utilities have all identified feedstock costs as a key barrier to project feasibility. Grants for feedstocks allow the funds to be made available for farmers and rural small businesses seeking markets for biomass feedstocks.

Direct co-firing of energy crops with coal is expected to be the short-term energy conversion technology of choice. The key difficulty of funding such projects through USDA is the relatively limited 9006 funding; unless restricted, several such projects could use most 9006 funding. A co-firing project targeting 10 MW of generating capacity from energy crops would require roughly 50,000 tons of feedstock per year, maximizing an available grant of \$10 per ton with a \$500,000 grant. We recommend \$10 per ton because it represents an appropriate

leveraging level at approximately a 25% increase in commodity value (for example, producers in the Chariton Valley Iowa switchgrass co-firing demonstration project currently receive roughly forty dollars per ton). Total grant size should be kept relatively low to provide for a larger number of grantees. Projects targeting more than 10 MW of generation from energy crops would still be eligible for subsidies but should expect lower per ton grant payments.

Funding under this subsection should be coordinated with new USDA rules and regulations for the Conservation Reserve Program (“CRP”) allowing biomass energy crop production on CRP acreage with some reduction in CRP payment in accordance with requirements to ensure that the environmental integrity of the program is not compromised. 16 U.S.C. § 3831 *et seq.*

4) Evaluation Criteria:

USDA funding programs normally have criteria developed for use in evaluating proposed projects. Should USDA choose to develop criteria for use in allocating Section 9006 funding, we recommend the criteria described below. We also suggest a point system (with a maximum of 25 total points available to be awarded to each proposal) that weighs the criteria according to what we view as the relative importance of the various aspects of a proposed project. All but two of the criteria below are based on the factors included in the statute. Pursuant to the statutory language, these criteria should be used to determine the size of loan or grant that qualified applicants should receive, in addition to whether an applicant qualifies for the program.

a) Feasibility (Maximum of six points)

The applicant’s score under this criterion should be weighted in favor of projects that are more economically viable, such as those with a shorter length of time until the energy savings or energy output generated by the project equals the cost of the project. Scoring should also reflect positively the extent to which the project is likely to be feasible in other respects, such as whether sufficient planning has been done and whether those selected to provide the equipment and perform necessary construction and maintenance have sufficient qualifications. Higher scores should be given to projects where the specific tasks necessary to achieve the renewable-energy production objective or energy efficiency savings are delineated. For renewable energy projects, this should include a statement regarding whether the state or service area in which the project is located has a clear policy or proven track record that facilitates interconnection to the grid (efficiency and solar thermal projects should be scored as having no interconnection barriers). Higher scores should also be given to projects using established technologies (those that have already been thoroughly tested and are readily available).

These elements are derived from the factors in the statutory language of Section 9006. The preference for established technologies meets the Section 9006 requirement that the USDA consider the type of renewable energy system. This element captures the intent behind Section 9006 that it not be a research and demonstration program. This criterion also favors projects that are more likely to provide an income stream in the near future and therefore be independently profitable. In addition, this recommendation favors projects that are more likely to be successful due to adequate planning and identification and acquisition of the necessary resources. Finally,

in most cases renewable energy systems cannot operate, even to generate energy solely for onsite use, without connecting to the grid. In sum, projects favored under this category are more likely to be replicated by those without outside funding and therefore foster development of renewable energy, energy efficiency, and alternative sources of income for rural communities. The large number of points available under this criterion reflects the number of considerations involved and the inclusion of two factors derived from the statutory language.

b) Size of the grant or loan requested (Maximum of five points)

Five points should be awarded for grant requests up to \$25,000; three points for grant requests between \$25,001 and \$50,000; one point for grant requests between \$50,001 and \$100,000; and no points for projects over \$100,000. Five points should be awarded for loan and loan guarantee requests. This recommendation is made in order to enable the program to fund as many projects as possible.

c) Other funding sources (Maximum of four points)

Points should be awarded to projects when state funding is available that could supplement federal funding. Up to four points should be awarded depending upon the percentage of project funds that could be provided by the state. Four points should also be awarded to projects when there is no other federal funding available to the project outside of the Section 9006 program.

This recommendation is made both to encourage state and federal cooperation and partnerships on renewable energy and energy efficiency projects, and to leverage the funding available under Section 9006.

d) Per dollar of funding, quantity of energy to be generated or saved by the project (Maximum of four points)

An applicant should receive a higher score for greater output of energy or greater energy savings per dollar of public spending. Wind assessments and energy efficiency audits should be scored on an estimation of how much energy would be generated or saved should the ultimate project go forward.

The quantity of energy generated or saved by the project is included in the statutory language of Section 9006 for USDA to consider when determining the size of grants and loans. We interpret this as quantity per taxpayer dollar because such efficiency allows USDA to make greater use of limited resources and, therefore, has more of a justification behind it than just gross output on a project by project basis.

e) Other environmental benefits (Maximum of three points)

The applicant's score under this criterion should be weighted in favor of projects that have additional environmental benefits that (for instance, water pollution reduction and prevention, or habitat creation) beyond the energy benefits achieved from the renewable energy

system or energy efficiency project. However, where such environmental benefits are a result of a requirement under federal or state law (for instance, state laws requiring anaerobic digesters), no points shall be awarded, and such projects should be funded only when funds remain after all other eligible applications have been funded.

The recommendation for consideration of parallel environmental benefits is included in the statutory language of Section 9006 for USDA to consider when determining the size of grants and loans. This acknowledges the secondary value of environmental goals beyond the primary renewable energy and energy conservation objectives of the program. This criterion will boost the strength of biogas utilization and native energy crop project applicants, which can provide a variety of environmental benefits.

f) Replicability (Maximum of three points)

The applicant's score under this criterion should be weighted according to extent to which the renewable energy system or energy efficiency improvement is replicable. This criterion is included in the statutory language of Section 9006 for USDA to consider when determining the size of grants and loans. Creation of a model project where there is no existing model should be viewed most favorably for increasing the diversity of market participants in renewable energy and energy efficiency sectors.

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The Environmental Law and Policy Center of the Midwest appreciates the opportunity to present its views on Section 9006 implementation to the USDA. We look forward to working with USDA in a cooperative manner to provide funding support for renewable energy and energy efficiency systems in FY03 and to implement this important new program as effectively as possible. Thank you for your consideration.